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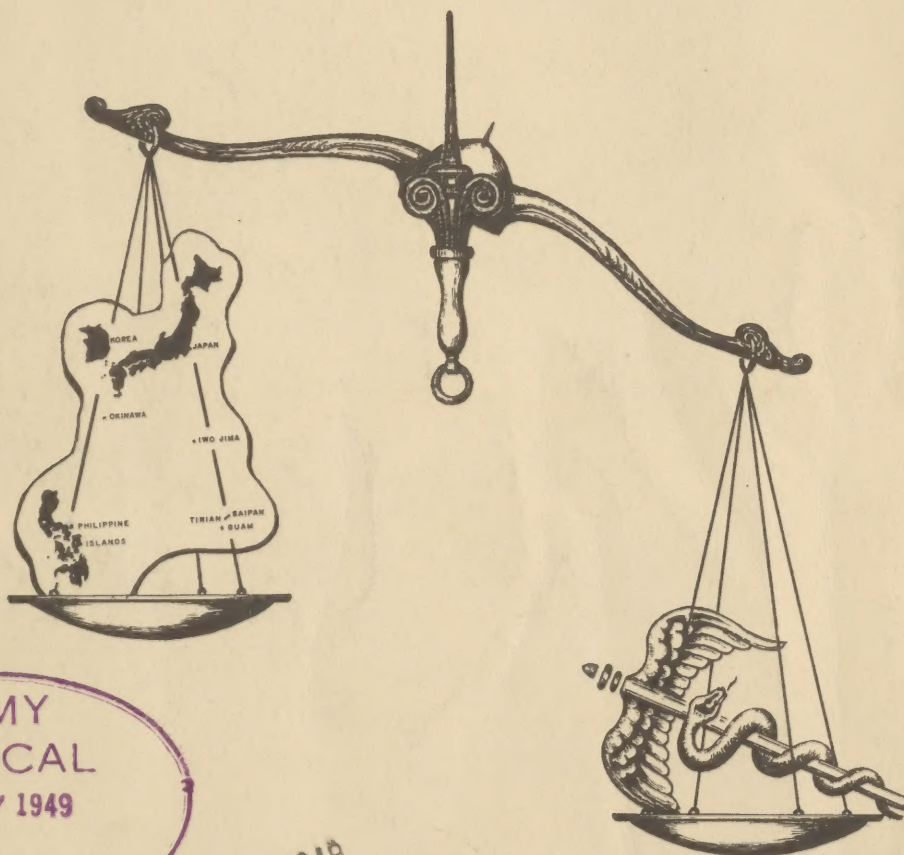
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**VOL IV NO 6**  
**1 JUN 1949**



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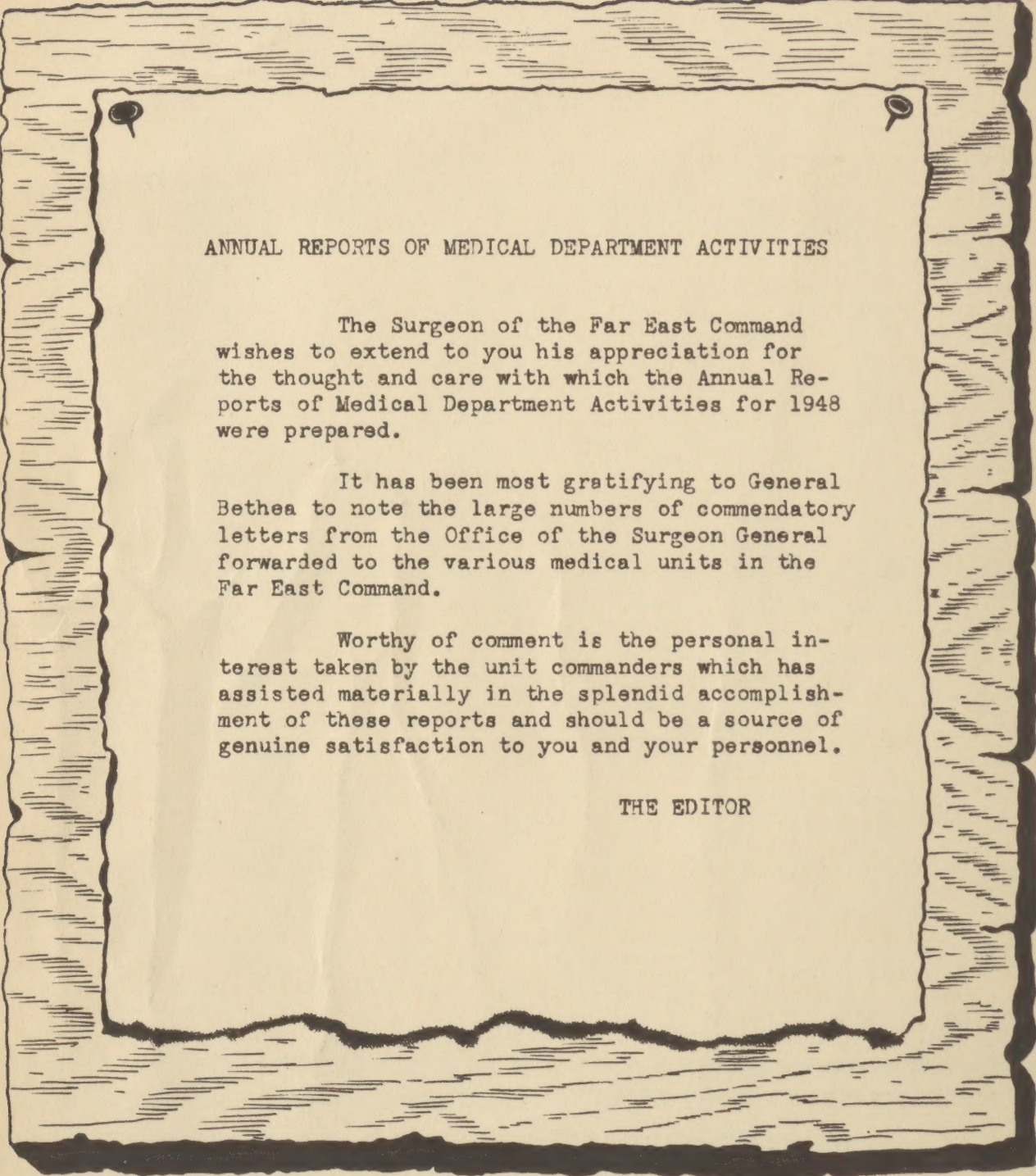
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A FAR EAST PERIODICAL OF MEDICAL DEPARTMENT INFORMATION

**SURGEON'S CIRCULAR LETTER**

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## ANNUAL REPORTS OF MEDICAL DEPARTMENT ACTIVITIES

The Surgeon of the Far East Command wishes to extend to you his appreciation for the thought and care with which the Annual Reports of Medical Department Activities for 1948 were prepared.

It has been most gratifying to General Bethea to note the large numbers of commendatory letters from the Office of the Surgeon General forwarded to the various medical units in the Far East Command.

Worthy of comment is the personal interest taken by the unit commanders which has assisted materially in the splendid accomplishment of these reports and should be a source of genuine satisfaction to you and your personnel.

THE EDITOR



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GENERAL HEADQUARTERS  
FAR EAST COMMAND  
MEDICAL SECTION

SURGEON'S CIRCULAR LETTER

APO 500

NUMBER. . . . . 6

1 June 1949

PART I

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I. Organization of the Medical Section

There were no changes in commissioned personnel currently assigned or attached to the Medical Section, General Headquarters, Far East Command, during the period covered by this publication.

II. "Medical Officer" - "Doctor"

The Surgeon General feels that the use of the term "doctor" should generally be encouraged, and that signs referring to medical officers such as "Ward Officer" might be changed to "Ward Doctor" or "Doctor's Office." (The Bulletin of the U. S. Army Medical Department, Vol. IX, No. 3, March 1949)

III. Army Medical Illustration Service



An agreement has been concluded with the Army Medical Illustration Service of the Army Institute of Pathology, and the Army Medical Library, whereby the Illustration Service will be the depository for all photographs and negatives of pathological or clinic interest.

IV. Heads Dental Research Group

Lt. Colonel Joseph L. Bernier, DC, Chief, Oral Pathological Section, Army Institute of Pathology, has been appointed Chairman of the Dental Research Advisory Committee to the Medical Research and Development Board, Surgeon General's Office.

V. Medical Records

Department of the Army Special Regulations 40-1025-1 (AFR 160-13 and NAVMED P-1294), "Joint Armed Forces Statistical Classification and Basic Diagnostic Nomenclature of Diseases and Injuries with a List of Surgical Operations," 1 April 1949, is now available in the Far East Command. Initial distribution of this regulation was accomplished in April 1949 so that each medical installation should now have copies and be familiar with its provisions. Sufficient copies should be requisitioned through

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normal Adjutant General supply channels to furnish copies to each dispensary and hospital ward office, chief of service, clinic, and administrative office concerned.

The importance of this regulation is emphasized. Each medical and dental officer should routinely consult this directive prior to recording a diagnosis or operation. Prior to being forwarded to the Surgeon General, individual medical records should be reviewed by each forwarding office to assure compliance with the provisions of AR 40-1025 and TB MED 203 as amended by SR 40-1025-1, 1 April 1949.

## VI. Recording of Dental Data on Standard Form 88

Standard Form No. 88, Report of Medical Examination, is still being forwarded with data required in paragraph 26 - Dental, inadequately recorded.

Instructions for recording information on the chart are printed in item 26 of the report of medical examination. They are specific and should be studied and closely observed by dental officers, or medical officers in their absence, making the examination.

In classifying malocclusion, use Angle's Classification and if disqualifying, so state under "Remarks."

Classify Periodontoclasia according to the degree of severity. If disqualifying use such terms as, advanced or severe, and whether local or generalized.

Unusual deposits of calculus should also be noted under "Remarks."

In cases involving missing teeth, a tooth that has drifted into serviceable occlusion with an opposing tooth may be the deciding factor in qualifying or disqualifying the individual undergoing the examination. It is suggested that the occlusion of these teeth be indicated by a diagonal line passing through the upper and lower teeth involved. This will remove any doubt in the mind of the reviewing authority. (See Chart II)

A Class I case need not be disqualifying provided the extraction of a nonrestorable tooth still leaves the candidate with sufficient natural serviceable opposing teeth to qualify under existing regulations.

A summary of dental defects should also be listed under paragraph 42.

In order to aid in standardizing dental charts, two charts are shown below as examples of the type of recording desired.

Chart No 1	26. DENTAL—INDICATE BY SUPERIMPOSING PROPER SYMBOL ON TOP OF NUMBER OF TOOTH; I. E., RESTORABLE CARIOUS TEETH BY O, EXTRACTION INDICATED BY /, MISSING NATURAL TEETH BY X, TEETH REPLACED BY FULL OR PARTIAL DENTURE HORIZONTAL LINE OVER XXX, TEETH REPLACED BY FIXED BRIDGE BRACKETS TO INCLUDE ABUTMENTS AND LINE UNDER TOOTH (1 X 3), CROWNS BY C, IMPACTED TEETH BY #, FILLINGS PRESENT IN TOOTH BY F, NORMAL TEETH BY N, WHEN DECIDUOUS TEETH PRESENT INSERT LETTERS IN RELATIVE POSITIONS. EXAMPLE: EDGBA ABCDE ABOVE OR BELOW 54321 12345.		MALOCCLUSION—N. S. A. <input checked="" type="checkbox"/> PERIODONTOKLASIA—N. S. A. <input checked="" type="checkbox"/> GINGIVITIS—N. S. A. <input checked="" type="checkbox"/>	
	UR	0 F / C F (3 X X   X X 3) N O F F /	UL	REMARKS AND DISQUALIFYING DENTAL DEFECTS
	LR	X F F N F N N N   N N N F F F N K	LL	Upper bridge serviceable
				CLASS: Class I
Chart No 2	26. DENTAL—INDICATE BY SUPERIMPOSING PROPER SYMBOL ON TOP OF NUMBER OF TOOTH; I. E., RESTORABLE CARIOUS TEETH BY O, EXTRACTION INDICATED BY /, MISSING NATURAL TEETH BY X, TEETH REPLACED BY FULL OR PARTIAL DENTURE HORIZONTAL LINE OVER XXX, TEETH REPLACED BY FIXED BRIDGE BRACKETS TO INCLUDE ABUTMENTS AND LINE UNDER TOOTH (1 X 3), CROWNS BY C, IMPACTED TEETH BY #, FILLINGS PRESENT IN TOOTH BY F, NORMAL TEETH BY N, WHEN DECIDUOUS TEETH PRESENT INSERT LETTERS IN RELATIVE POSITIONS. EXAMPLE: EDGBA ABCDE ABOVE OR BELOW 54321 12345.		MALOCCLUSION—N. S. A. <input checked="" type="checkbox"/> PERIODONTOKLASIA—N. S. A. <input checked="" type="checkbox"/> GINGIVITIS—N. S. A. <input type="checkbox"/>	
	UR	X F X X F N X X   X X N N F X X N	UL	REMARKS AND DISQUALIFYING DENTAL DEFECTS
	LR	N N F N X N N N   N N F F F N N N	LL	Upper partial denture serviceable
				CLASS: II



VII. Alphabetical List of TB MED's Pertaining to the Far East

ALLERGY - Allergy. TB MED 202, 15 Oct 45.

AMEBIASIS - Amebiasis. TB MED 159, May 45; change 1, 21 Nov 47. Water Treatment in Areas where Amebiasis and Schistosomiasis are Hazards. TB MED 190, Aug 45.

AMPUTATION - Coordination of Physical and Surgical Therapy of Orthopedic and Amputation Case. TB MED 10, 14 Feb 44 (Ref. Orthopedic).

APHASIA - Aphasic Language Disorders. TB MED 155, Apr 45.

ARSENIC - Use of Bal in Oil and Bal Ointment in Treatment of Systemic Poisoning Caused by Lewisite and Other Arsenical Blister Gases. TB MED 101, 4 Oct 44. Use of Bal in Oil for Treatment of Certain Severe Mapharsen Reactions. TB MED 104, 12 Oct 44.

ASPHYXIA - Treatment of Respiratory Depression and Asphyxia. TB MED 131, Jan 45.

BAL - Use of Bal in Oil and Bal Ointment in Treatment of Systemic Poisoning Caused by Lewisite and Other Arsenical Blister Gases. TB MED 101, 4 Oct 44 (Ref Arsenic). Use of Bal in Oil for Treatment of Certain Severe Mapharsen Reactions. TB MED 104, 12 Oct 44 (Ref Arsenic, Mapharsen).

BLOOD - Taking of Blood Specimens. TB MED 78, 4 Aug 44.  
Complications of Blood Transfusion. TB MED 204, Oct 45.

BONIN ISLANDS - Medical and Sanitary Data on the Bonin Islands. TB MED 83, 7 Aug 44.

BURNS - Surgical Management of Thermal Burns. TB MED 151, Mar 45.

CASUALTIES - Notes on Care of Battle Casualties. TB MED 147, Mar 45 and C-1, 9 Jan 47.

CELEBES - Medical and Sanitary Data on Celebes. TB MED 67, 19 July 44.

CEYLON - Medical and Sanitary Data on Ceylon. TB MED 109, 28 Oct 44.

CHEST - Notes on Certain Diseases of the Chest. TB MED 69, 22 Jul 44.

CHOLERA - Cholera. TB MED 138, Feb 45.

CONSULTATION - Consultation Services. TB MED 156, 4 Dec 46.

DENTAL - Instructions for Preparing and Mailing Prosthetic Cases to Central Dental Laboratory. TB MED 148, Mar 45.

DDT - Spraying of DDT From Aircraft. TB MED 200, 6 Feb 46.

DIABETES - Diabetes Mellitus. TB MED 168, Jun 45.

DIAGNOSIS - Nomenclature and Method of Recording Diagnoses. TB MED 203, Oct 45. (Amended SR 40-1025-1, 1 April 49)

DIPHTHERIA - Cutaneous Diphtheria. TB MED 143, Feb 45. C-1, 4 Feb 47.

DISINFESTATION - Disinfestation Procedures. TB MED 184, July 45.

DRUGS - Descriptive list of Drugs and Chemicals in Far East CAD Units. TB MED 149, 17 Mar 45.

DYSENTERY - Bacillary Dysentery. TB MED 119, Nov 44.

ELECTROENCEPHALOGRAPHY - Electroencephalography: Operative Technique and Interpretation. TB MED 74, 27 Jul 44.

ENCEPHALITIS - Japanese B Encephalitis. TB MED 181, 6 Apr 47.

FILARIASIS - Filariasis (Wuchereria) with Special Reference to Early Stages. TB MED 142, Feb 45.



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FIRST AID - Use of War Wound Moulages in Teaching Emergency Medical Care and First Aid. TB MED 116, 18 Nov 44 (Ref Moulages).

FRACTURES - Reduction of Fractures During Fluoroscopic Exposure. TB MED 22, 21 Mar 44.  
Suspension-Traction Treatment of Fractures. TB MED 133, Jan 45.

FRENCH INDO-CHINA - Medical and Sanitary Data on French Indo-China. TB MED 86, 18 Aug 44.

FUNGIPROOFING - Moistureproofing and Fungiproofing (Tropicalizing) Medical Department Equipment. TB MED 186, July 45.

GAS - First Aid for Liquid Blister Gas Contamination of the Eye. TB MED 153, Mar 45.  
Technique for Applying Gas Mask to a Helpless Patient. TB MED 169, Jun 45.  
Respiratory Protective Devices. TB MED 223, 21 Jun 46.

GOGGLES - Mounting Corrective Lenses in Welder's Goggles, TB MED 92, 15 Sep 44.

GUAM - Medical and Sanitary Data on Guam. TB MED 57, 23 June 44.

HAINAN - Medical and Sanitary Data on Hainan. TB MED 113, Nov 44.

HEAT - Prevention and Treatment of Adverse Effects of Heat. TB MED 175, Jun 45 and C-1, 25 Nov 46.

HEPATITIS - Infectious Hepatitis. TB MED 206, 3 Nov 45.

IMMUNIZATION - Immunization. TB MED 114, 28 Feb 47.

INDIA - Medical and Sanitary Data on India. TB MED 174, Jul 45.

IZU ISLAND - Medical and Sanitary Data on Izu Island. TB MED 83, 7 Aug 44.

INSECTICIDE - Impregnation of Clothing with Insect Repellant (Dimethyl Phthalate). TB MED 121, Dec 44.  
Spraying of DDT from Aircraft. TB MED 200, Feb 46.

JAPAN - Medical and Sanitary Data on Japan. TB MED 160, May 45.

JAVA - Medical and Sanitary Data on Java. TB MED 102, 10 Oct 44.

KAZAN ISLAND - Medical and Sanitary Data on Kazan Island. TB MED 83, 7 Aug 44.

KERATECTOMIES - Indications and Contraindications for Keratoplasty and Keratectomies. TB MED 177, Jul 45.

KERATOPLASTY - Indications and Contraindications for Keratoplasty and Keratectomies. TB MED 177, Jul 45.

KOREA - Medical and Sanitary Data on Korea. TB MED 208, 6 Dec 45.

KURILE ISLANDS - Medical and Sanitary Data on the Kurile Islands. TB MED 24, 27 Mar 44.

LABORATORY - Function and Scope of Medical Department Laboratories. TB MED 135, Jan 45.

LEISHMANIASIS - Visceral Leishmaniasis - Kala-Azar. TB MED 183, Jul 45.

LEPROSY - Leprosy. TB MED 205, 1 Nov 45.

MALARIA - Drug Suppressive Treatment of Malaria. TB MED 65, 3 Jul 44.  
Treatment of Clinical Malaria and Malaria Parasitemia. TB MED 72, 4 Mar 47.  
Malaria Control in the Army. TB MED 164, Jun 45.

MALAYA - Medical and Sanitary Data on British Malaya. TB MED 95, 27 Sep 44.

MANCHURIA - Medical and Sanitary Data on Manchuria. TB MED 216, 13 Feb 46.

MAPHARSEN - Use of Bal in Oil for Treatment of Certain Severe Mapharsen Reactions. TB MED 104, 12 Oct 44 (Ref Bal).



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MARCUS ISLANDS - Medical and Sanitary Data on Marcus Island. TB MED 83, 7 Aug 44.

MARIANA ISLANDS - Medical and Sanitary Data on the Mariana Islands. TB MED 20, 15 Mar 44.

MARSHALL ISLANDS - Medical and Sanitary Data on the Marshall Islands. TB MED 111, 3 Nov 44.

MEETINGS - Professional Rounds and Meetings in Hospitals. TB MED 210, 10 Dec 45.

MENOPAUSE - Menopause. TB MED 158, May 45.

MOISTUREPROOFING - Moistureproofing and Fungiproofing (Tropicalizing) Medical Department Equipment.  
TB MED 186, Jul 45.

MONGOLIAN - Medical and Sanitary Data on Irkutsk and Chita Oblasts, and the Yakut and Buryat-Mongolian Autonomous Republics. TB MED 209, 29 Nov 45.

MOULAGES - Use of War Wound Moulages in Teaching Emergency Medical Care and First Aid. TB MED 116, 18 Nov 44.

MUSEUM - Medical Museum and Arts Detachments (MM&AD). TB MED 199, 12 Sep 45.

NEUROLOGY - Neurological Diagnostic Techniques. TB MED 76, 23 Mar 45.

NEUROPSYCHIATRY - Lecture Outlines for Officers on Personnel Adjustment Problems. TB MED 12, 22 Feb 44 and C-1, 30 Jan 47.

Lecture Outlines for EM on Personal Adjustment Problems. TB MED 21, 20 Dec 45

Induction Station Neuropsychiatric Examination. TB MED 33, 21 Apr 44.

Reconditioning Program for Neuropsychiatric Patients. TB MED 80, 3 Aug 44.

Treatment Program for Psychiatric Patients in Station and General Hospitals. TB MED 84, 20 Feb 47 and C-1, 25 Nov 47.

Neuropsychiatry for General Medical Officer. TB MED 94, 21 Sep 44.

WAC Recruiting Station Neuropsychiatric Examination. TB MED 100, 4 Oct 44.

Group Psychotherapy. TB MED 103, 10 Oct 44.

Clinical Psychological Service in Army Hospitals. TB MED 115, 21 Nov 46.

Psychiatric Social Work. TB MED 154, 4 Dec 46.

Psychiatric Testimony Before Court Martial. TB MED 201, 1 Oct 45.

NEW GUINEA - Medical and Sanitary Data on Dutch New Guinea. TB MED 18, 10 Mar 44.

NOMENCLATURE - Nomenclature and Method of Recording Diagnoses. TB MED 203, Oct 45.

NUTRITION - Food and Nutrition. TB MED 23, 23 Mar 44.

Classification of Foods and Factors for Conversion of Unit Packages to Pounds for Use in Dietary Analysis of Rations. TB MED 25, 28 Mar 44.

Emergency Feeding of Infants, Children and Other Special Groups of Civil Populations. TB MED 53, 12 Jun 44.

Nutritional Value and Characteristics of Certain Expeditionary and Packaged Rations. TB MED 141, Feb 45.

Medical Nutrition Examination. TB MED 224, 16 Aug 46.

ORTHOPEDIC - Coordination of Physical and Surgical Therapy of Orthopedic and Amputation Cases. TB MED 10, 14 Feb 44.

OXYGEN - Oxygen Therapy Apparatus, Closed Circuit: Boothby-Lovelace (Medical Dept. Item #93640).  
TB MED 1, 16 Dec 43.

PALAU ISLANDS - Medical and Sanitary Data on the Palau Islands. TB MED 41, 11 May 44.

PARA-AMINOBENZOIC ACID - Use of Para-Aminobenzoic Acid in Bacteriological Culture Media. TB MED 60, 29 Jun 44.

PATHOLOGY - Facilities Provided for Tissue Pathology in U. S. Army. TB MED 19, 11 Mar 44.

PENICILLIN - Penicillin. TB MED 9, 12 Feb 44 and C-1, 4 Sep 45.



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PHILIPPINE ISLANDS - Medical and Sanitary Data on Philippine Islands. TB MED 68, 18 Jul 44.

PILONIDAL CYST - Pilonidal Cyst and Sinus. TB MED 89, 2 Sep 44.

PLAGUE - Plague. TB MED 124, Dec 44.

POLIOMYELITIS - Poliomyelitis. TB MED 193, 31 Aug 45.

RATIONS - Classification of Foods, and Factors for Conversion of Unit Packages to Pounds for Use in Dietary Analysis of Rations. TB MED 25, 28 Mar 44 (Ref Nutrition).

Nutritional Value and Characteristics of Certain Expeditionary and Packaged Rations. TB MED 141, Feb 45.

RECEPTION - Medical Procedures to be followed at Reception Stations. TB MED 180, Jul 45.

RECONDITIONING - Physical Reconditioning for Bed and Ward Patients. TB MED 137, Jan 45.

Film Programs for Educational Reconditioning in Army Service Forces Hospitals. TB MED 145, Feb 45.

Films for Reconditioning for Bed and War Patients in ASF Hospitals. TB MED 166, Jun 45 and C-1, 13 Jul 45.

Music in Reconditioning in ASF Convalescent and General Hospitals. TB MED 187, 26 Jul 45.

RECORDS - Indicating Place of Admission on WD MD Forms No. 52. TB MED 7, 15 Jan 44.

Preparation of Part IX, Communicable Diseases, of WD MD Form 86ab. TB MED 92, 15 Sep 44.

REDEPLOYMENT - Medical Problems of Redeployment. TB MED 170, Jun 45.

REHABILITATION - The Army's Aural Rehabilitation Program for the Deafened. TB MED 195, 18 Aug 45.

REPELLENT - Impregnation of Clothing with Insect Repellent. TB MED 121, Dec 44.

RESPIRATORY SYSTEM - Control of Disease of Respiratory System and Other Diseases Transmitted by Discharge from Respiratory Tract. TB MED 47, 28 May 44.

RHEUMATIC FEVER - Rheumatic Fever. TB MED 97, 29 Sep 44 and C-1, 14 Jan 47.

RINGWORM - Control of Ringworm in Military Animals. TB MED 161, May 45.

ROENTGENOGRAPHY - Excessive X-Radiation Exposures During Roentgenography and Roentgenoscopy. TB MED 62, 1 Jul 44 and C-1, 3 Dec 46.

RUSSIA - Medical and Sanitary Data on Kamchatka. TB MED 46, 28 May 44.

Medical and Sanitary Data on Khabarovsk Krai and Maritime Krai (Far Eastern Territory) U.S.S.R. (Excluding Kamchatka Oblast). TB MED 88, 29 Aug 44.

RYUKYUS ISLANDS - Medical and Sanitary Data on the Ryukyus Islands. TB MED 108, 24 Oct 44.

SAND-FLY FEVER - Sand-fly Fever (Pappataci, Phlebotomus). TB MED 82, 8 Aug 44.

SCHISTOSOMIASIS - Schistosomiasis Japonica. TB MED 167, Jun 45 and C-1, 14 Jan 48.

Water Treatment in Areas where Amebiasis and Schistosomiasis are Hazards. TB MED 190, Aug 45.

SOLVENTS - Health Hazards from Industrial Solvents. TB MED 35, 27 Apr 44.

SPINAL CORD - Convalescent Care and Rehabilitation of Patients with Spinal Cord Injuries. TB MED 162, May 45.

SULFONAMIDES - Treatment of Infectious Diseases with Sulfonamide Drugs. TB MED 172, Jun 45 and C-1, 17 Dec 46.

SUMATRA - Medical and Sanitary Data on Sumatra. TB MED 120, Dec 44.

SWIMMING POOLS - Sanitary Control of Army Swimming Pools and Swimming Areas. TB MED 163, May 45.



THAILAND - Medical and Sanitary Data on Thailand. TB MED 63, 5 Jul 44.

TRENCH FOOT - Trench Foot. TB MED 81, 4 Aug 44 and C-1, 3 Oct 44.

TRICHOMONAS - Trichomonas Vaginal Vaginitis. TB MED 8, 22 Jan 44.

TUBERCULOSIS - Tuberculous Pleurisy with Effusion. TB MED 71, 28 Jul 44.

Diagnosis of Active Tuberculosis. TB MED 221, 29 Apr 46 and C-1, 27 Dec 46.

Physical and Educational Program for Tuberculosis Patients in Army Hospitals. TB MED 222, 16 May 46.

Prevention of Spread of Tuberculosis in Army and Air Force Hospitals. TB MED 231, 6 Jan 49.

TYPHUS - Scrub Typhus Fever (Tautsugamushi Disease). TB MED 31, 21 Jan 48.

Epidemic (Louse-borne) Typhus. TB MED 218, 17 Apr 46.

VENEREAL DISEASE - Management of Venereal Diseases. TB MED 230, 6 Jan 49.

VETERINARY - Veterinary Food Inspection Procedure. TB MED 226, 28 Jun 47.

VIRUS - Neurotropic Virus Diseases. TB MED 212, 16 Jan 45 (See Poliomyelitis, Infectious Hepatitis and Jap B Encephalitis).

WATER - Sanitary Control of Water Supplies for Fixed Installations. TB MED 229, 18 Jan 49.

Water Treatment in Areas where Amebiasis and Schistosomiasis are Hazards. TB MED 190, Aug 45.

X-RAY - Life of Photocentgen Films. TB MED 99, 1 Oct 44.

Electrical Requirements for X-Ray Apparatus in the Field or in Temporary Installations. TB MED 117, Nov 44.

Sensitized Material - Transportation and Storage of Unexposed X-Ray Film. TB MED 191, 10 Aug 45.

#### VIII. Recent Department of the Army and FEC Publications



AR 615-300, C-5, 14 Apr 49 - Par 21. AWOL Enlisted Personnel who are Found to be Physically or Mentally Unfit.

AR 615-366, C-1, 14 Apr 49 - Par 8c, Disposition of Individuals Found to be Physically Unfit for Military Service.

DA GO 13, 28 Feb 49 - Medical Section, Richmond General Depot, U. S. Army, Virginia, Discontinued.

DA GO 16, 16 Mar 49 - Sec III, Fort Totten, New York, Redesignated a Class I Installation under Commanding General, First Army. Fort Totten Army Medical Center Remains Class II Installation under Surgeon General. Sec V - Battle Honors: 30th Portable Surgical Hospital.

Army-Navy Catalogue of Medical Materiel, Change Bulletin No. 3, Jan 49.

FM 21-6, 1 Jan 49 - This is final edition. Future listings and index of Department of the Army publications will be published in the 310-20 series of Special Regulations.

SR 345-920-1, 15 Mar 49 - Records and Reports: Records Administration - Disposition of Records. Chapter 12. Medical Administration Files. Sec I - General. Sec II - Hospital and Dispensary Administration Files. Sec III - Medical and Surgical Service Files. Sec IV - Dental Service Files. Sec V - Medical Research and Experimental Files. Sec VI - Laboratory Service Files. Sec VII - Sanitary Engineering and Sanitation Files. Sec VIII - Veterinary Services Files. These regulations supersede TM 12-259, 1945, and WD Pamphlet 12-14, 1945, and all changes, etc.

SR 35-1405-1, 28 Mar 49 - Pay and Allowances of Officers and Others of equivalent Status. Par 2 - Lump Sum Pay for Accrued Leave - Medical and Dental Officers.

SR 40-590-44, 30 Mar 49 - Medical Service - Admission to and Treatment in Medical Facilities of Department of Army in Continental United States of members of United States Soldiers Home.



SR 350-230-1, 30 Mar 49 - Training of Military Personnel at Civilian Institutions.

SR 40-1025-1, 1 Apr 49 - Joint Armed Forces Statistical Classification and Basic Nomenclature of Diseases and Injuries with a list of Surgical Operations. (These Regulations supersede pars 78, 81, 83, AR 40-1025, 12 Dec 44 and pars 21, 27 and 30, TB MED 203, 19 Oct 45) In case of conflict with prior directives the provisions of these regulations will govern.

SR 32-10-50, 4 Apr 49 - Clothing and Equipage. Orthopedic Footwear.

SR 35-210-49, 4 Apr 49 - Finance and Fiscal - General and Special Appropriations. Fiscal Year 1949. Pages 73 through 79 - Medical. These regulations supersede Sec I a, Chapter 2, TM 14-700 and so much of C-1 as pertains to Sec I a.

SR 40-985-5, 19 Apr 49 - Medical Service Records and Reports of Sick and Wounded Animals. These regulations supersede AR 40-2245, 12 Oct 42, and par 9, AR 40-2235, 27 Nov 42.

SR 730-5-10, 20 Apr 49 - Oversea Supply - Acquisition and Transfer of Supplies and Services on a Cost Basis in Oversea Commands. Par 2 b (7) Medical and Dental Care. Regulations on Medical Service.

SR 700-105-5, 21 Apr 49 - Supplies and Equipment - Legal Restrictions on Use of Government-owned, Passenger-carrying Vehicles or Aircraft.

T/O&E 1-1523, 24 Jan 49 - Strategic Support Squadron. Sec III - Medical.

T/O&E 10-227, 23 Feb 49 - Quartermaster Clothing and General Supplies Depot Company. Sec III - Medical.

T/O&E 55-16, 7 Mar 49 - Headquarters and Headquarters Company, Transportation Truck Battalion. Sec III - Medical.

T/O&E 5-315, 25 Mar 49 - Engineer Construction Battalion. Sec II - Medical Detachment, Engineer Construction Battalion. Sec III c - Equipment for Medical Detachment.

## PART II

### TECHNICAL

<u>SUBJECT</u>	<u>SECTION</u>	<u>PAGE</u>
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#### IX. Recognition of Nerve and Tendon Severance in the Hand by Colonel E. W. Hakala, MC, 49th General Hospital, APO 1052 (Presented at Eighth Army Medical Meeting, 27 April 1949)



It is not unusual for a patient to arrive at this or any other hospital with a recently sutured laceration of the hand or wrist in whom nerve and/or tendon severance was missed. The diagnosis of nerve and tendon severance is not a difficult problem for the traumatic surgeon who faces that situation frequently. It is the doctor who only occasionally is faced with the necessity of making the proper diagnosis who needs the help. My talk, therefore, will be aimed at the doctors who are not directly involved with traumatic surgery. My problem today is to present a simplified resume of hand anatomy as well as to emphasize the absolute necessity for a careful preoperative examination of the hand before suturing lacerations in this region.



Many doctors do operative work on the hand under local anesthesia, and certainly it is satisfactory for work on the dorsal aspect of the hand and fingers. Most of us, however, prefer to use a tourniquet, and in order to do so without its being painful to the patient one needs either a general anesthetic or a brachial plexus block. If the patient is put to sleep before a definite diagnosis is made it will then be impossible to make the diagnosis of nerve or tendon severance, except by wide and thorough exploration of the wound. It is logical, therefore, that the dressing must be removed from the traumatized hand and the hand thoroughly examined pre-operatively.

Any patient who has received trauma to the hand is in some shock, has pain and is apprehensive about the extent of his injury. Because of these factors the examination is difficult unless one allays the patient's fears. I would suggest that you spend a few minutes in explaining to the patient the necessity for a thorough examination, encouraging him to cooperate and giving him an analgesic. The patient must cooperate in order for an adequate examination to be made.

Today we will deal only with complete severances of either nerve or tendon, or both. The recognition of a partially severed tendon or nerve is difficult. You must understand that this presentation is a simplified practical lesson in anatomy.

The thumb has only two phalanges; all the other fingers have three. The phalanges are named proximal, middle and distal in the fingers and proximal and distal in the thumb. Consequently, in the thumb we have an MP (metacarpo-phalangeal) joint, but only one IP (interphalangeal) joint. The fingers, on the other hand, have an MP joint and two IP joints. There are proximal IP and distal IP joints in these fingers, commonly abbreviated PIP and DIP joints. We will confine our discussion to those nerve or tendon severances at or distal to the wrist.

I like to divide the muscles with which we move our fingers into two groups: extrinsic and intrinsic. The extrinsic muscles are those whose origins are proximal to the wrist. The intrinsic muscles are those whose origins are distal to the wrist. It is obvious that severance of any nerve at the wrist can not affect the motor function of any extrinsic muscle. There are three groups of intrinsic muscles in the hand. These are the thenar, hypothenar and interosseous groups. In the interosseous group are included the lumbricals which can be ignored from the practical standpoint. I will, therefore, mention only the interossei when speaking of this group.

The hypothenar group is on the ulnar aspect of the hand and is completely innervated by the ulnar nerve. The thenar group is completely innervated by the median nerve. The interosseous group is completely innervated by the ulnar nerve. In other words, all of the intrinsic muscles of the hand are ulnar innervated except the thenar group. I wish you to think of intrinsic innervation in the above simplified manner, although such is not exactly the case. From the practical standpoint it is unnecessary and actually undesirable to know that the radial two lumbricals of the interosseous group are median innervated, and that the adductor pollicis and one-half of the flexor pollicis brevis of the thenar group are ulnar innervated.

The median and ulnar nerves are both motor and sensory (mixed nerves). The radial nerve, which is the third one involved in this discussion, is purely sensory.

In testing for severance of a mixed nerve one should test both the motor and sensory fibers. If one knows the muscles innervated by a nerve it is simple to ask the patient to use one of those muscles in order to determine integrity of the motor component of that nerve. Such muscle action should be performed against resistance from the examiner. While resisting action of the muscle the examiner should also palpate the muscle belly or tendon involved to be sure that the muscle is working.

All three nerves going to the hand provide sensation to fairly constant zones. There is some overlap of sensory innervation at the margins of these zones, but somewhere in each zone there is an autonomous area supplied only by that nerve. Pin prick is the best single means of testing for sensation. One must remember that shock, pain and apprehension may affect the patient's responses.

#### DIFFERENTIAL DIAGNOSIS OF NERVE SEVERANCE AT THE WRIST

1. ULNAR: This nerve is motor to the hypothenar and interosseous groups. It is sensory to the ring and little finger as shown in Figure 1.



## ULNAR

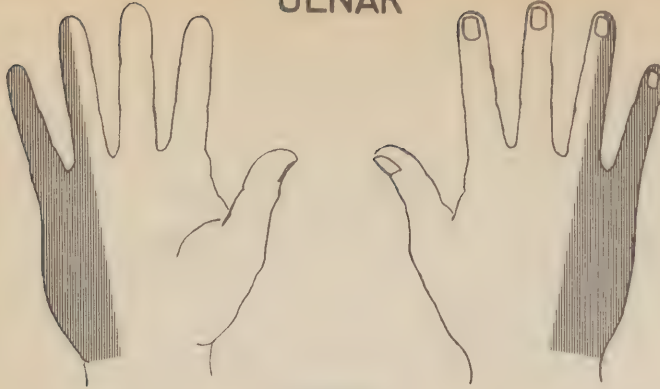


FIGURE 1

This movement should be resisted to determine its strength.

Only the 1st dorsal interosseous is accessible to palpation, its belly being on the radial border of the 2nd metacarpal.

The autonomous sensory distribution zone of the ulnar nerve is the palmar surface of the tip of the little finger. This should be tested with pin prick and compared with sensation in the normal hand. One frequently gets slight hypesthesia because of the shock, pain and apprehension affecting the patient, even though the nerve is intact. If anesthesia is not present, one can safely presume that the nerve has not been completely severed.

2. MEDIAN: This nerve is motor to the thenar muscle group and sensory to the hand as shown in Figure 2.

## MEDIAN

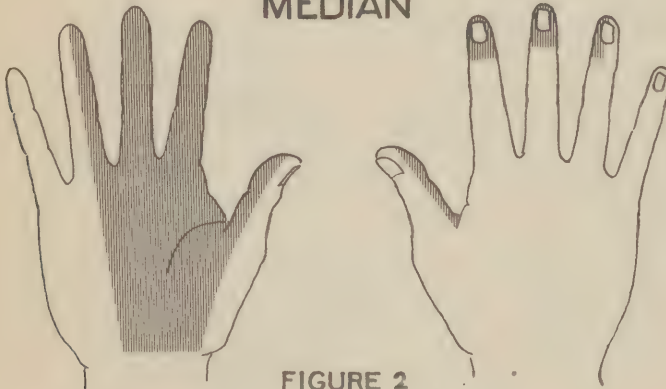


FIGURE 2

The simplest and best test for motor integrity is to test for opponens pollicis function. No other test is necessary. Opposition motion of the thumb is best described as follows: Place the thumb along side the radial border of the hand. In this position the plane of the thumb nail is perpendicular to the plane of the palm. Rotate the thumb from this position through an arc towards the little finger until the palmar surface of the thumb approximates the base of the little finger. In travers-

ing this arc the plane of the thumb nail changes from perpendicular to the palm to parallel to the palm. In other words, the thumb actually rotates through nearly 90° during its movement from the radial border of the hand to the base of the 5th finger. This movement is performed by the opponens pollicis muscle which is a member of the thenar group. This motion should be resisted by the examiner while he is palpating the belly of the opponens muscle.

The autonomous area of sensory distribution of this nerve is the palmar surface of the tip of the index finger which should then be tested with pin prick.

3. RADIAL: The radial nerve is purely sensory beyond the wrist and its zone of distribution is shown in Figure 3.



## RADIAL

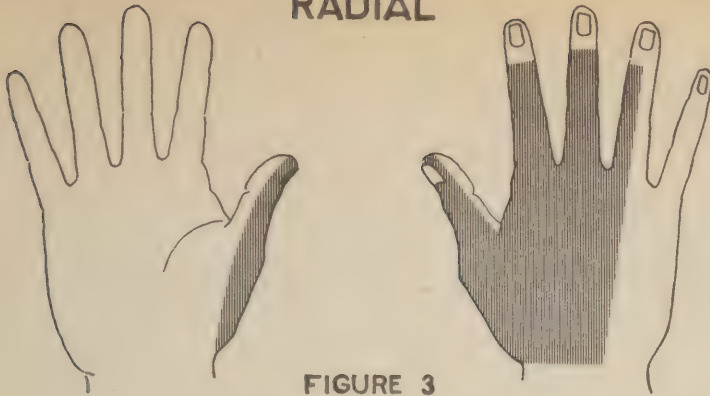


FIGURE 3

The adjacent figures shows an autonomous area of sensory distribution being on the dorsum of the hand between the first and second metacarpal shafts.

### DIAGNOSIS OF TENDON SEVERANCE AT OR BEYOND THE WRIST

Here we are dealing with extrinsic muscles whose tendons span the wrist joint to their insertions in the hand. These tendons can be severed anywhere between the wrist and their insertion. If one knows the insertion of all of these tendons, and this is not difficult, one can reason out logical tests for integrity of the tendon in question. One should recall that each one of these tendons has a primary function which is to move the last joint which it spans. Secondly it will move any joint proximal to this last joint. Thus, the deep flexor of the ring finger flexes the DIP joint primarily, but assists in flexion of the PIP, MP and wrist joints. In testing for integrity of any tendon one should test for motion at the last joint spanned while palpating for tautness of the tendon distal to the laceration.

1. THUMB EXTENSORS AND LONG ABDUCTOR: Figure 4 shows the relationships of the extensor pollicis longus, extensor pollicis brevis, and abductor pollicis longus.

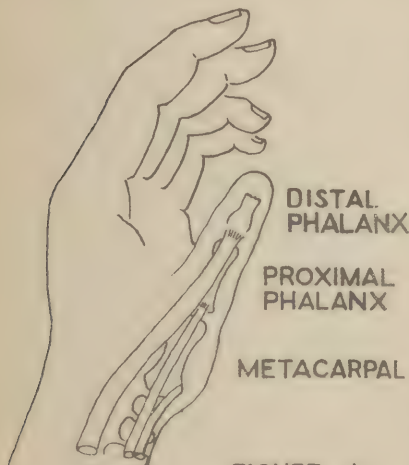


FIGURE 4

The extensor pollicis longus forms the dorsal margin of the anatomical snuff box. Its course is along the dorsal aspect of the thumb (on the index finger side) to its insertion into the dorsal aspect of the base of the distal phalanx. It extends the IP joint. One tests for it by resisting extension at the IP joint while palpating the tendon itself distal to the laceration.

The extensor pollicis brevis and the abductor pollicis longus together form the volar margin of the anatomical snuff box. These two tendons are so intimately associated with one another in their course that one can consider them a single tendon. One is rarely severed without severance of the other anywhere along the course where they run together. The extensor pollicis brevis inserts on the dorsal aspect of the base of the proximal phalanx. It extends the MP joint and one tests for its function by resisting such extension while palpating for tautness of the tendon. There is very little motion at the MP joint even normally. It is practically impossible to extend the MP joint without extending the IP joint. However, the extensor pollicis brevis is most easily palpable when the IP joint is flexed (eliminating the long extensor as a secondary extensor of the MP joint). If one combines a little abduction with this extension the short extensor tendon is palpable to its maximum.

Abduction of the thumb can best be described as follows: Hold the thumb along the radial margin of the palm with the palm facing you. From this position raise the thumb towards you, perpendicularly away from the palm. This is the motion which should be resisted while palpating for integrity of the abductor pollicis longus tendon which inserts into the radial aspect of the base of the first metacarpal.



2. **WRIST EXTENSORS:** There are three wrist extensors and only two wrist flexors. I keep this straight in my mind by recalling that the position of function of the wrist is in slight extension. In order to stabilize the wrist in this degree of extension for grasping function of the hand one needs three muscles to overpower the two flexors.

On the radial aspect of the dorsum of the wrist there are two extensors: The extensor carpi radialis longus and the extensor carpi radialis brevis as shown in Figure 5.

## DORSUM

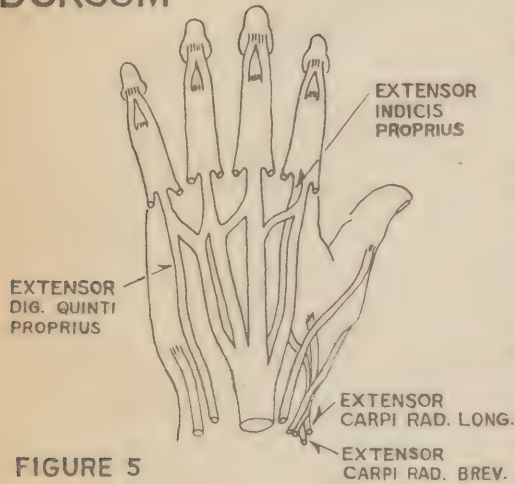


FIGURE 5

communis tendon to the middle finger completely severed at about midshaft of the metacarpal and still have extension of the middle finger through the slip from the ring finger. The same can occur in the ring finger and index fingers. True enough, the extension is not quite as strong as with an intact tendon, but one could miss this severance if he did not resist extension at the MP joint of the involved finger.

Also shown in Figure 5 is the extensor indicis proprius to the index finger which is capable of extending that MP joint even though the extensor communis is severed. The same holds true in the little finger, which is provided with the extensor digiti quinti proprius in addition to receiving one of the extensor communis tendons.

One of the most important points I wish to put across today is an understanding of the extensor apparatus of the fingers (excluding the thumb, which has none).

FIGURE 6

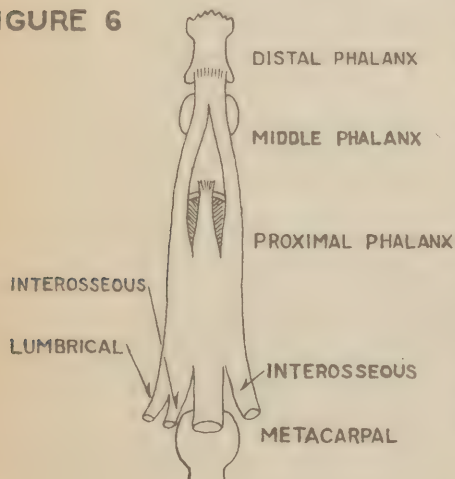


Figure 6 depicts the extensor apparatus of a finger of the right hand. We are looking down on its dorsal aspect. The extensor apparatus is the name given to the union of all tendons having to do with finger extension. These tendons unite into one continuous sheet of tissue on the dorsum of the proximal phalanx. There are thickenings in this continuous sheet of tissue as shown in the figure. The extensor communis tendon joins this apparatus at its midpoint, proximally. From the ulnar aspect of the MP joint comes an interosseous tendon to join this apparatus. From the radial aspect of the joint comes another interosseous tendon. More radial to the latter appears a lumbrical tendon to join the extensor apparatus. We should all think of the extensor as a continuous solid sheet of tissue through which either the interosseous tendons or the communis tendon can work independently of one another. Over the distal end of the proximal phalanx the extensor apparatus divides into three slips which are definitely separated from one another. These are one central and two lateral slips. The central slip inserts into the base of the middle phalanx and extends the PIP joint;



the two lateral slips extend beyond this insertion to unite into one slip which is inserted into the base of the distal phalanx to extend the DIP joint.

Now let us look at Figure 7.

## DORSUM

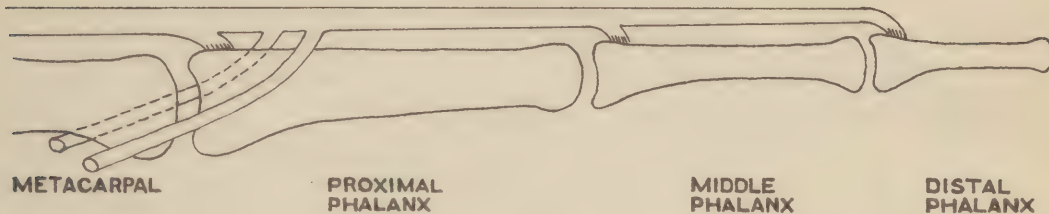


FIGURE 7

This is a side view of a finger. In this picture one sees that the extensor communis tendon has an insertion into the base of the proximal phalanx as well as joining the interosseous tendons to form the extensor apparatus. Figure 7 shows the interosseous tendons spanning the lateral aspects of the MP joint.

The importance of the extensor is that even though the extensor communis tendon to a finger be severed, the only active motion lost is extension at the MP joint. In the case of a severed extensor communis tendon the interossei are capable of extending both the PIP and DIP joints because of their insertion into the common extensor apparatus. Figure 7 also shows why the interossei are capable of flexing the MP joint even though both flexors of the finger are severed proximal to that joint. Because the interosseous tendons span the lateral aspect of the MP joint as shown, their angle of pull on the extensor apparatus is such that they will flex the MP joint and extend both IP joints.

In testing for severance of extensor communis tendon proximal to the MP joint one must test only MP joint extension. Severance of the extensor slips distal to the point where the extensor apparatus divides into three slips is obvious. If active extension at the PIP joint is absent, the central slip has been severed. If extension at the DIP joint is absent the lateral slips which insert into the distal phalanx have been severed.

The interossei therefore have three functions: (1) abduction and adduction of the fingers. (2) MP flexion. (3) IP extension.

4. WRIST FLEXORS: - Figure 8 below shows the two wrist flexors and the palmaris longus between them. These three are the most superficial tendons on the flexor surface of the wrist.



FIGURE 8

The flexor carpi radialis is on the radial aspect of the wrist where it inserts into the base of the second metacarpal. It flexes the wrist radialward and its integrity is tested by resisting that motion and palpating for tautness of the tendon.

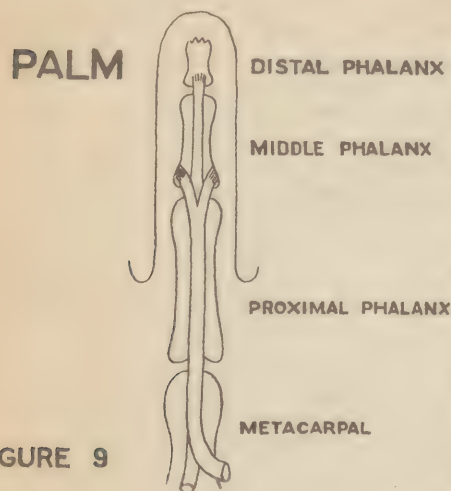
The flexor carpi ulnaris is on the ulnar aspect of the flexor surface of the wrist where it inserts in the pisiform carpal bone. It flexes the wrist ulnarward and integrity of this tendon is tested by resisting that motion and palpating the tendon. The palmaris longus tendon inserts into the proximal edge of the palmar fascia and cups the palm. Resistance of that motion and palpation for the taut tendon in the middle of the flexor aspect of the wrist will determine its integrity.

5. THUMB FLEXOR: - The flexor pollicis longus is the only extrinsic muscle inserting on the flexor aspect of the thumb.



It inserts into the flexor aspect of the base of the distal phalanx. Its primary function is flexion of the IP joint. Resistance of that motion while palpating the tendon on the flexor aspect of the proximal phalanx will determine its integrity.

6. FINGER FLEXORS: - There are two flexors to each finger. Figure 9 is a schematic representation of the flexor aspect of a finger.



As shown in Figure 9, the flexor digitorum sublimus is superficial to the flexor digitorum profundus. At the middle of the proximal phalanx the sublimus divides into two slips, each one inserting on the antero-lateral aspect of the base of the middle phalanx. Through this split of the sublimus tendon runs the profundus tendon to its insertion into the base of the distal phalanx.

There is nothing mysterious about the function of these two tendons. The profundus tendon flexes the DIP joint. It should be tested by holding the MP and PIP joints in extension while resisting flexion at the DIP joint. One tests for sublimus function by resisting flexion at the PIP joint. The DIP joint should be flaccid while testing for sublimus function in order to eliminate the profundus tendon as a secondary flexor of the PIP joint.

FIGURE 9

In addition to the resistance of the joint motion being tested, one should palpate the flexor tendons to determine their tautness. This is done distal to the laceration and ideally in the palm of the hand because the tendons are not as easily palpable in the finger as they are in the palm. If the laceration is distally placed in the palm, one then must palpate for tendon tautness on the fingers.

#### SUMMARY

1. Do a thorough preoperative examination of the hand. This requires removal of all dressings.
2. A number of the simplified but practical points of anatomy presented today will clarify the potentialities of any laceration distal to the wrist.
3. The shape and location of the skin wound is not always diagnostic as to the nerve or tendons involved. A sharp pointed weapon obliquely thrust through the skin may sever a nerve or tendon distant from the skin laceration.
4. One tests both the motor function and sensory function in checking ulnar and median nerve integrity.
5. In testing for tendon severance, one must resist the joint motion being tested as well as palpate the involved tendon distal to the laceration for tautness.

2. Physical Medicine in Army Hospitals by 1st Lt. Clarissa Hicks, WMSC, 382d Station Hospital, APO 235-1



Physical Medicine is the employment of the physical and other properties of light, heat, cold, water, electricity, and mechanical agents for diagnosis and for physical and occupational therapy. The use of light is called actinotherapy, heat is thermotherapy, water is hydrotherapy, electricity is electrotherapy, and therapeutic exercises are mechanotherapy or kinesiotherapy. Until fairly recently the application of physical agents for therapeutic and diagnostic purposes was called "physiotherapy" or "physical therapy." About the year 1945, the term was changed to "physical medicine," and the term physical therapy is applied to just one division of the field of physical medicine. The other two branches are occupational therapy and reconditioning or rehabilitation. Each branch has separate and distinct



functions to perform, with the burden of diagnosis and therapeutic treatments being carried by the physical therapy department. The physician specializing in physical medicine is now called a "Physiatrist," a term decided upon by the Council of Physical Medicine of the American Medical Association in December 1945.

Physical therapy is the oldest and also the newest field of medicine. It is the oldest field because it dates back to the time when pre-historic man first rubbed an injured muscle and discovered that pain was relieved, or when he lay in the sun and learned that its warmth brought relief and relaxation to the tired, painful muscles, or when he bathed his wound in a running stream. Later ancient physicians used physical agents in therapy. The Egyptians were sun worshippers, as were other ancient peoples. The Greeks were proficient in the use of exercise and massage. Hippocrates of Cos, the "Father of Medicine," was familiar with the therapeutic value of massage, and his directions for giving massage apply equally as well today as when he wrote them centuries ago. The Romans practiced hydrotherapy. Some of the early physicians treated their patients with electric shock, using the electrified torpedo fish. The Tokyo Medical Journal of 1881 stated that the Japanese have used cold baths for 800 years, and the Chinese have at least one book on gymnastics which was written as long as 5000 years ago.

During the Middle Ages, scientists continued to make contributions to the field of physical medicine. Those who contributed to the field of light therapy were Sir Isaac Newton, Johann Ritter, and Niels Finzen. William Gilbert, the physician to Queen Elizabeth of England; Luigi Galvani, Alessandro Volta, Guillaume Duchenne, and Jacques d'Arsonval made important discoveries in electrotherapy. Hydrotherapy owes its development to the Silesian peasant Vincent Priessnitz. Wilhelm Winternitz of Vienna, and our own American, the late Simon Baruch, father of Bernard Baruch. Those who have contributed to the field of exercise are Geronimo Merdurelio, who lived in the 16th century; Ambroise Pare, the famed "Barber Surgeon;" Thomas Sydenham of England; and Peter Ling, of Sweden. The first American professor of physical therapy was R. Tait McKenzie, who was appointed to this post at the University of Pennsylvania early in this century.

There were a few physical therapists employed during World War I to work in Army hospitals, but it was not until World War II that the field of physical medicine received its greatest impetus. During and after this war, literally thousands of soldiers received physical therapy and reconditioning in Army hospitals at home and abroad. At the beginning of the war, qualified physical therapists were classified in the Army as Physical Therapy Aides, employed by the Civil Service Commission. In March of 1943, these women were reclassified as military personnel and were commissioned as 2nd lieutenants or higher, relative rank. Later on, they were given full rank for the duration of the National Emergency plus six months. A large number of these women were sent overseas to set up departments of physical therapy in the numbered hospitals where they often had to find quarters for their clinic and improvise most of their equipment. Others were sent to various Army hospitals in the States.

Only a few physical therapy physicians were enlisted from civilian practice and assigned to physical therapy departments of Army hospitals. The major portion of the supervision of the physical therapy departments was done by orthopedic surgeons. Because there was not a sufficient number of physical therapy physicians, a three months course was set up at Mayo Clinic to train military physicians in physical medicine. Dr. Frank H. Krusen was in charge. About 225 medical officers were selected to receive this special training, and were assigned to Army hospitals to administer the Physical Medicine program. By this time the term "physical medicine" had been substituted for the old term of physical therapy. When one of these men was assigned to a hospital, physical therapy was transferred from the orthopedic or other service to its own field of physical medicine.

Soon after the beginning of World War II, it became evident that there was not only a shortage of physical medicine physicians but also of trained physical therapists. Several schools were established to train physical therapists. Only college graduates with majors in physical education or biologic sciences were eligible. The training period was twelve months in duration; six months were spent as a student and six were spent as an apprentice. Upon completion of the training course, these women were commissioned and assigned to Army hospitals. At first only civilians were trained, but in June of 1943, some of the schools were reorganized to train military personnel selected from the Women's Army Corps. The requirements for selection were recommended by the American Medical Association. They were the completion of four years of study in an approved college with emphasis on physical education, or two years of college with emphasis on biologic sciences. Practically all the WACs selected were college graduates with high scholastic standing. The training period was nine months instead of twelve, but the training itself was essentially the same. These women were also commissioned as 2nd lieutenants. All these women were encouraged but not required to take the Physical Therapy Registry examination.



In 1947 the Women's Medical Specialist Corps was established and qualified women were integrated into the Regular Army. A reserve corps was also set up. Colonel Emma Vogel, who had been the chief physical therapist in the Office of The Surgeon General, was selected to head the new corps composed of physical therapists, occupational therapists, and dietitians.

During the war, in addition to the program to train officers, schools of one month's duration were set up to train both enlisted men and women as physical therapy technicians. They received elementary lectures on the principles of the different modalities of physical therapy. They also received instruction and practical experience in many of the techniques employed in physical therapy. These people did not receive commissions.

At present, in so far as is possible, a physiatrist is in charge of the entire physical medicine section. He coordinates the work of physical therapy, the occupational therapy and the reconditioning departments. The physiatrist examines all patients referred to him by the medical officers of the other services. He prescribes all treatments to be given in each of the departments in his service. He checks on the progress of each patient and prescribes changes in treatments. He is available for consultation in case of emergency. He makes ward rounds with the other medical officers and carries on a program of treatments for patients confined to the wards. He also cooperates with other medical officers in making diagnosis for which the physical therapy department is equipped. He makes diagnostic reports and keeps case histories.

In the absence of a physiatrist, the physical medicine section may be administered by the orthopedic department or some other department. At Fitzsimons General Hospital, physical medicine was administered by the surgical service. In other situations where there is a shortage of personnel, each medical officer may refer his patients directly to the physical therapist in charge of the clinic, and she in turn follows his recommendations. She does not change his prescriptions without first consulting him and getting his permission.

The physical therapist, the occupational therapist, and the reconditioning man are not qualified to prescribe treatments for patients. The physical therapist can and does make diagnostic tests for the various sections, especially for the neurological section, but the interpretation of these tests is made by the medical officer. Too many medical officers have had little or no training in physical medicine, so it often becomes necessary for the physical therapist to make suggestions, but these suggestions are not followed unless they meet with the approval of the medical officer referring the patient.

Far too many people of the Medical Department have the idea that physical therapy is of value only in orthopedic problems, poliomyelitis, and in a few other cases. In my opinion physical therapy has also proved to be very valuable in the treatment of certain medical conditions such as myositis, bursitis, and fibrositis; cardiovascular disorders such as hypertension and a cardiac neurosis; and peripheral vascular diseases such as Buerger's disease. Physical medicine is especially valuable to the neurologist because of diagnostic tests and the treatment by physical means of facial paralysis, infectious lower motor neuron diseases such as poliomyelitis, Guillain-Barre' syndrome, and other polyneuritis conditions; degenerative toxic and deficiency neuritis; hemiplegia whether caused by cerebral accident or trauma, and paraplegia or transverse myelitis, are a great challenge to the physiotherapist. Other neurological conditions which respond to physical therapy are multiple sclerosis, and infantile cerebral palsies. The great value of both physical therapy and occupational therapy in the treatment of psychiatric disorders has been proved, and their use has shown tremendous increase in scope during the last few years.

Physical medicine is rapidly developing and expanding, and in the future it will be based on sound scientific lines, for many of the larger and finer medical centers have established research centers. This, in part, has been due to the wonderful work which was accomplished in Army and government hospitals during the war. This paper has dealt more with physical therapy because the writer is more familiar with that field, but the fields of occupational therapy and reconditioning are just as important. Physical medicine does not claim to be of primary importance, although it seems to give the only answer in some conditions. Rather, this field is an auxiliary to other fields of medicine. It takes up where surgery, orthopedics, and other fields leave off, and works to reach the maximum function and adjustment of the individual so that he may again become a productive member of his community with the ability to meet the needs of daily life. The physical therapist, the occupational therapist, and the reconditioning man must have an inexhaustable supply of patience, for often it is weeks or even months before a patient shows progress. On the other hand, the work is most self-satisfying for nothing gives the therapist more of a thrill than to



know that in a large measure she has been responsible for restoring a human being to health and usefulness.

- References: 1. Physical Medicine in General Practice - Edited by Arthur Watkins.  
2. Physical Medicine - Krusen.  
3. Electrotherapy and Light Therapy - Kovac's.

XI. Clinical Results of Non-Staining Impregnation for Caries, Prophylaxis and Desensitization by Lt. Colonel Harry E. Ramsey, DC, and Captain Carter H. Lewis, DC, 49th General Hospital, APO 1052



Current popular publications have recently devoted a great deal of space to the various methods of caries control and desensitization, and have expressed preference for the Sodium Fluoride Treatment or the Gottlieb Treatment. It is not our intention to condone one or the other. We are merely presenting the results of our observations in using the Gottlieb method of treatment as a desensitizing agent.

Dr. Bernard Gottlieb, former head of Dental Research at The University of Vienna and now Director of Research at Baylor University School of Dentistry, has presented a new theory for the control of caries and desensitization of tooth structure. The theory is based upon the fact that it is possible to block the invasion paths, in this case the Lamellae, by chemical means. This could be done by applying a solution of Zinc Chloride (40%), which coagulates the albuminous material, and then applying a solution of Potassium Ferrocyanide (20%), which would precipitate the coagulum to form a bulky mass of white insoluble Zinc Ferrocyanide. This would effectively block the tiny opening and prevent bacteria from entering and also block the transmission of pain from thermal shock or mechanical irritation.

METHOD OF TREATMENT

1. Thorough prophylaxis.
2. Isolate area to be impregnated with cotton rolls and dry with continuous blast of air.
3. Swab with Benzine, which removes oily deposits.
4. Use wetting agent, such as Nacconal 1% to reduce surface tension. (We have omitted this step as Nacconal is not available.)
5. With cotton pellets apply 40% Zinc Chloride and leave for one minute then precipitate with Potassium Ferrocyanide solution (20%), rubbing constantly during the process.
6. Some authorities advocate the use of Silver Nitrate (10%) precipitating with Adrenalin Chloride (1-100 or 1-1000) following the use of the Zinc Chloride solution on posterior teeth.

We have used this method successfully under the following conditions: Jackets and 3/4 crowns, inlay and alloy preparations, denuded dentine, and all gingival areas.

CASE HISTORY: A young male patient with severe gingival recession throughout the entire arch due to periodontoclasia was examined. Gingival third cavities were present on the upper central incisors. These cavities plus the exposed root area were extremely sensitive to cold water, air, and mechanical irritation with an explorer.

The treatment outlined was followed and performed twice at the same sitting. After treatment, there was no longer any pain sensation upon using an explorer, and only a slight sensation when ice-water was forced directly into the cavities. It is believed that repeated treatments would even block this sensation.

CASE HISTORY: A young Medical Officer with lower right bicuspid extremely sensitive to the explorer and cold water was examined. After the first treatment a marked improvement was noted,



to the relief of the patient who had been bothered by these sensations for several years. There was little gum recession in this case, the cemento-enamel junction showed about a millimeter above the gingival. It was necessary to repeat the treatment the following week to effect a complete blockage of sensation. In certain cases a third treatment the following week is indicated.

CASE HISTORY: A young female with a small but sensitive gingival third cavity on an upper cuspid was examined. In this case it was necessary to desensitize the area without causing any discoloration and, if possible, to avoid the placing of a restoration due to esthetics. The outlined treatment plan was followed and the area completely desensitized with no discoloration resulting, and without the necessity of placing a restoration. We have found this treatment to be most gratifying in cases of this sort.

CASE HISTORY: A 3/4 crown bridge abutment was prepared on an upper central for a young male patient. At the next appointment it was found that the tooth was extremely sensitive to mechanical irritation, as frequently happens when no crown form is available. One treatment completely blocked these sensations so that the casting could be painlessly placed and removed. It is our belief that in sealing the tubules, discoloration will be prevented under the crown.

#### SUMMARY

We have been more successful using the Gottlieb Treatment than with the so-called "colorless Silver-Nitrate," which must be precipitated immediately and the precipitate washed off to prevent staining, or the use of 33-1/3% of Sodium Fluoride Solution as recommended by Dr. George R. Warner in the April 1949 issue of Oral Hygiene.

Attention is invited to articles in the February and March 1949 issues of the Texas Dental Journal. These can be obtained by writing to Dr. Bernard Gottlieb, Baylor University College of Dentistry, Dallas, Texas; and to National Synthetics, Inc., 270 LaFayette Street, New York 12, N. Y., requesting literature on "Impregmol," the commercial preparation.

#### XII. Penicillin and Streptomycin Team Established at Army Hospitals by Major Mildred I. Clark, ANC, Chief Nurse, Far East Command (In two parts - Part I)

General: The proper administering of penicillin and streptomycin therapy to patients in hospitals requires a thorough knowledge and understanding of the proper technique for aqueous solution. The action of these preparations is such that they must be dispensed only by the most accurate method. Personnel who administer these drugs should be carefully trained in human anatomy, proper medication or dosage, and alert to the action of the drug after it has been injected.

Organization and Function of Team: Several hospitals in the Far East Command have established teams for administering penicillin and streptomycin and the results obtained have been highly successful. The term "Penicillin and Streptomycin Team" applies to a group of selected, well-trained personnel who administer this therapy to all patients in a hospital for whom the drug is ordered on the basis of a twenty-four hour period. This team operates as part of the Central Supply Department which is under the direct supervision of the Surgical Service.

The minimum number of personnel required to operate this team efficiently is five (5) which should include at least one (1) graduate nurse in charge who will be responsible for the proper administration, supervision, and recording of the drug. Four (4) enlisted men, preferably surgical technicians, thoroughly trained in administration of drug therapy are required. This suggested number consisting of a total of five (5) members of the team is considered adequate coverage for a twenty-four hour period in a three-hundred-bed hospital where approximately seventy-five (75) doses of penicillin are to be administered on a three-hour schedule. Only one member of the team should be required to cover each eight-hour period during twenty-four hours.

The responsibilities of the members assigned to the Penicillin Team are:

1. Preparation of dosage and administration intramuscularly of all penicillin and streptomycin which is prescribed.



2. Assembling and properly preparing the necessary equipment for operation of the team.

3. Dispensing and recording of penicillin used for soaks and sprays administered to patients including the out-patient clinic.

Source of Penicillin and Procedure for Ordering: Penicillin and streptomycin are obtained through medical supply channels where they are safely stored in the same manner as narcotics.

These drugs are requisitioned from medical supply by the pharmacy. It is the responsibility of the pharmacy to mix the desired solution and keep in stock an adequate amount of penicillin in oil.

Station *63<sup>rd</sup> Station Hospital* 1 June 1949  
 For *Central Supply Service, (Penicillin Team)*  
 Rx  
 Gms. or Cc.  
 Penicillin ..... 250,000 Units  
 Strength of Solution:  
 20,000 Units per cc.  
 No. *I*  
*Roy D. Galt*  
 Medical Corps

The procurement of the desired amount needed to administer to patients by this team is the responsibility of the medical officer in charge of the central supply department who completes the standard prescription form including the signature and receives the drug from the pharmacy when needed as illustrated.

The standard prescription blank is also used by the ward medical officer who completes the following information when penicillin or streptomycin therapy is ordered for the patient as illustrated.

Station *63<sup>rd</sup> Station Hospital* 1 June 1949  
 For *Sgt. John J. Martin, Bed 12, Ward "A"*  
 Rx  
 Gms. or Cc.  
 Penicillin Therapy -  
 20,000 Units  $\bar{q}$  3 hours for  
 9 doses. To begin at 0900  
 No. \_\_\_\_\_  
*Roy D. Galt*  
 Medical Corps

Station *63<sup>rd</sup> Station Hospital* 2 June 1949  
 For *Sgt. John J. Martin, Bed 12, Ward "A"*  
 Rx  
 Gms. or Cc.  
 Penicillin Therapy To be  
 "Discontinued" after  
 1500 hours dosage  
 No. \_\_\_\_\_  
*Roy D. Galt*  
 Medical Corps

A standard prescription form completed by the doctor when penicillin or streptomycin therapy is discontinued on the patient as illustrated.

To be continued in next issue.



## RESTRICTED

PART IIISTATISTICALEvacuation:

1. Tabulated below are the number of patients evacuated from the major commands to the zone of interior during the four report weeks in March and the number of patients awaiting evacuation as of 25 March 1949:

	BY AIR	BY WATER	TOTAL
JAPAN	58*	4*	62*
MARBO	36	1	37
PHILCOM	24	3	27
RYCOM	31	2	33
FAR EAST COMMAND	149	10	159

\* Includes 5 patients who originated in Korea.

2. During the four report weeks in March, 51 patients were evacuated from Korea to Japan, by air transportation, for further hospitalization and disposition or for onward evacuation to the zone of interior. As of 25 March 1949, 4 patients in Korea were awaiting evacuation to Japan.

3. Evacuations of military personnel per thousand strength for the period 26 February to 25 March were as follows:

JAPAN	.37	PHILCOM	1.1
KOREA	6.1	RYCOM	1.3
MARBO	1.7	FEC	.70

Hospitalization:

1. The bed status as of 25 March 1949 was as follows:

	Total T/O Beds Authorized	Total T/O Beds Established	Total T/O Beds Occupied
JAPAN	4,650	4,678	2,436
KOREA	300	300	146
MARBO	800	580	220
PHILCOM	1,525	1,520	986
RYCOM	750	445	291
FEC	8,025	7,523	4,079

2. The percent of T/O beds and established beds occupied as of 25 March 1949 was as follows:

	Percent Authorized T/O Beds Occupied	Percent of Established Beds Occupied
JAPAN	52	52
KOREA	49	49
MARBO	28	38
PHILCOM	65	65
RYCOM	39	65
FEC	51	54

3. Admission rates per 1000 troops per annum for the four week period ending 25 March 1949 were as follows:

	FEC	JAPAN	KOREA	MARBO	PHILCOM	RYCOM
All Causes	654	809	713	190	530	387
Disease	606	757	675	164	478	337
Injury	48	52	37	26	51	51
Psychiatric	13	14	26	15	11	6.0



# RESTRICTED

	<u>FEC</u>	<u>JAPAN</u>	<u>KOREA</u>	<u>MARBO</u>	<u>PHILCOM</u>	<u>RYCOM</u>
Common Respiratory Disease	117	171	76	26	46	2.4
Influenza	2.6	3.4	1.6	1.9	2.7	0
Primary Atypical Pneumonia	7.5	8.8	6.2	.62	.67	14
Common Diarrhea	2.5	1.4	4.7	2.5	11	0
Bacillary Dysentery	.50	.12	0	.62	3.3	0
Amebic Dysentery	7.1	.23	1.6	0	4.0	.60
Malaria, New	1.4	.35	3.1	0	8.7	1.2
Infectious Hepatitis	3.3	3.0	14	1.2	4.7	1.8
Mycotic Dermatoses	3.8	5.0	0	2.5	2.7	1.2
Rheumatic Fever	1.6	2.3	1.6	0	0	1.2
Venereal Disease	138	169	219	20	63	127

## MEDICAL JOURNALS

The following extract of an indorsement from the Surgeon General regarding delay in receipt of current issues of medical journals is published for the information of all concerned:

"..... It is regretted that the procurement of medical journals has been unavoidably delayed this year. However, subscriptions have been entered for all stations within your command, and distribution lists for these stations will be forwarded to your office within the near future. Subscriptions placed by the Armed Services Medical Procurement Agency include back issues for the calendar year 1949. Initial issues for the various journals should commence to arrive during the month of May....."

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Major General Bethea extends an invitation to all personnel of the Medical Department to prepare and forward, with view to publication, articles of professional or administrative nature. It is assumed that editorial privilege is granted. Copy should be forwarded so as to reach the Medical Section, GHQ, FEC, not later than the 10th of the month preceding the issue in which publishing is desired.

Capt. Vincent I. Hack, Editor